

Interpreting Technologies. Introduction.

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I am extremely honoured to be the Guest Editor of the first issue devoted specifically to Interpreting by this renowned journal. Tradumàtica has identified the connection between Interpreting and Technology as a topic of interest, thus acknowledging the relevance of an intersection that is undoubtedly gaining momentum both in Spain and worldwide. I am also thrilled by the opportunity of revealing the state of the art on this topic through eight contributions from four countries on three different continents. The transformation of the interpreter's tasks, the digitization of the sector, remote interpreting, interpreter training, machine interpreting, and many other relevant aspects are covered by our contributions, thereby configuring an attractive and updated body of research and professional insights for our readers. But as well as the thrill of the opportunity, I also feel the weight of the responsibility of editing an issue that, for the same reason mentioned above, will be regarded as a benchmark for the interpreting world in Spain, and hopefully also worldwide.

Although it is true that it was only last year when Claudio Fantinuoli edited *Interpreting and Technology*, most probably the first book entirely dedicated to “a domain of investigation that is still underrepresented in the field of Interpreting Studies” (Fantinuoli: 2018, 1), research efforts of various kinds are increasingly trying to focus on the challenges posed by technological disruption within this realm.

As one of our contributors, Christopher Mellinger, rightly points out in this issue, a significant achievement of Fantinuoli's very recent work [both his aforementioned book itself (2018c) and other articles also published last year (2018a, 2018b)] lies in calling for urgent additional research and empirical studies that analyse the impact of the new tools on interpreter performance. Although it is difficult to determine whether this is due to the immediate response to Fantinuoli's call for the “upcoming technological turn” he announces in the first chapter of his book (one that should be taken by the interpreting community) or to the mere pressure of an explosive paradigm shift (discussed below), the truth is that in the space of just one year not only the first monograph on the topic but also two special editions in journals (Pokorn and Mellinger in 2018 in *Translation and Interpreting Studies* were published, together with this edition of Tradumàtica in 2019. Moreover, one of the most active researchers in interpreting technologies, Sabine Braun, wrote one chapter on the matter for the *Routledge Handbook of Translation Studies and Linguistics* (Carl and Braun: 2018) and another for the *Routledge Handbook of Translation and Technology* (Braun: 2019); and specific articles and industry reports (such as *The Interpreting Index 2019* and *Interpreting across the globe by*

Nimdzi, Hickey 2019a y 2019b) have also seen the light. Witnessing such production in a very short period of time clearly proves that the combination of interpreting and technology has become an attractive formula for researchers.

All these recent overviews of the current technological landscape in interpreting now available highlight the variety of tools that interpreters may use to enhance their professional performance. Christopher Mellinger's article "Computer-assisted interpreting technologies and interpreter cognition: A product- and process-oriented perspective", for instance, outlines current product-oriented approaches to researching interpreting technologies and interpreter cognition. His review points out potential disconnects between these two areas, indicating that greater methodological reflection on how to bridge this scholarship is required.

Mellinger's experience in this domain enables him to provide an outstanding review of the current state of development of computer-assisted interpreting technologies. In his opinion, the relationship between technology and cognition remains relatively unexplored. Mellinger suggests opting for an approach to research that allows for real-time data collection that examines the interpreting process as it unfolds. He also advocates a process-oriented approach to interpreting technology research to better understand the impact that the tools have on interpreter cognition and behaviour and to complement existing studies that have alluded to potential effects.

In this sense, some scholars (Fantinuoli: 2018c, 13) underline the possibility of a deterioration of working conditions. Fantinuoli suggests that the large-scale adoption of these technologies could lead to the commoditization of interpretation, thus intensifying the effects of modern paradigms of labour organization, such as outsourcing; and this may bring about a partial depersonification of the service provider, a subsequent downward spiral of economic decline and, ultimately, de-professionalization of the industry.

In this regard, for instance, futuristic interpreting consoles currently available in the market actually make it possible to rewind live and listen again to parts of the discourse that have already been lost while we keep on interpreting, but can this feature be used without damaging the following parts of our interpretation? Or what about con/sim devices that enable the recording of the original speech that is supposedly going to be interpreted in consecutive mode and immediately provide a simultaneous interpretation instead? Well, most interpreters I know refuse to opt for that when the audience is looking and waiting for a consecutive and not a simultaneous interpretation. If we apply Mellinger's proposals, the benefits of theoretically grounded, methodologically-sound research that incorporates both product and process data could outweigh the potential difficulties and provide us with better insights into the actual relevance of all these new tools.

Mellinger points out that professional and standards organizations, policy makers, and industry stakeholders alike need empirical research on the use of interpreting technologies to better understand the role that they play in multilingual communication, and process-oriented research may also wish to look to human-computer interaction and cognitive

ergonomics to see how interpreter cognition might be influenced by the use of specific technologies.

Mellinger's remarks may invite us to consider the current hype in translation regarding the "augmented translator", because, if transferred to interpreting, we could also consider the "augmented interpreter" (KCI: 2019). These, nonetheless, would probably be more linked to virtual reality, since technological enhancements within that field (virtual reality itself, but also augmented reality, as well as immersive communication environments) may offer the possibility to overcome existing constraints. Dan Chen, Myles and Callaghan (2016), for instance, explored the use of smart-glasses for technology-augmented interpreting.

Last year, I was the keynote speaker at Elia Together (a two-day event that brings together professionals from across the industry for an open dialogue on industry trends) and was asked to speak about the new technological paradigm shifts in Translation and Interpreting. In doing so, I described the technological paradigm shift we have experienced in Translation in the last few decades as a fluid one, whereas the one we have witnessed in more recent times in Interpreting can be seen, in my opinion, as an explosive one. While Computer Assisted Translation (CAT) and Machine Translation Post Editing (MTPE) have quietly transformed Translation as a profession, the true impact of technology on Interpreting has been more recent, sudden and violent.

It goes without saying that the introduction of simultaneous interpreting, which became fully visible during the Nuremberg trials, is widely considered as the turning point in the history of Interpreting. But since then, two other elements have shaped our field as we know it today: the Internet and the introduction of portable devices (laptops, mobile phones, tablets and the like). When I became a professional interpreter at the end of the 80s, we had to carry incredibly heavy bags full of dictionaries, handbooks and self-made glossaries to the booth, but all of them are replaced nowadays by a portable device and an Internet connection. Another important change is one dealt with in Rafael Porlán's article "The use of portable interpreting devices: An overview". His contribution is nourished by his rich professional experience and deals with the increasing use of portable interpreting equipment (PIE), also known as bidule. Nowadays, this actually means that a fair number of interpretations that used to be provided in consecutive can now be offered in simultaneous mode. This change of mode was unthinkable not long ago, but now is considered a true option for customers. However, the use of portable sound equipment has grown at such rapid pace in the conference interpretation market that it is sometimes employed in environments that do not meet the best working conditions for interpreters.

Interpretation with PIE systems is the right solution for small groups, visits and environments which make it difficult to set up traditional simultaneous interpretation booths and systems. However, their use has been stretched to the point of placing interpreters in difficult situations for which the equipment was never designed.

Porlán mentions the advent of the 2008 economic crisis as a turning point when conference interpreters and international conference organisers alike wanted to continue providing customers with language services, but had to look for affordable solutions. This

favoured the use of what he describes as “not a new high-tech, top-level audio-visual technology, but an analogic sound emitting one based on good, old-fashioned radiofrequency, even if with some restyling applied to it”. Although simultaneous would be the modality used in most of the cases, there are no rules in this regard since both the speaker and the interpreter may feel more comfortable resorting to consecutive interpretation at certain times.

After providing a little bit of history on the issue, Porlán thoroughly describes the type of equipment, as well as the working environment. For the latter, he discusses the interpreting modalities involved, flexibility regarding time and location, possible issues for the audience, sound quality and, interestingly enough, also the lack of a booth as a protective element.

A thought-provoking discussion follows on how to ensure adequate working conditions for the interpreter within this realm and whether interpreters should defend some caveats. Bearing in mind all these aspects, Porlán considers the need for specialised training to be able to adequately use this portable equipment.

The author’s final conclusions include suggestions for interpreters, who should refrain from accepting certain jobs if conditions for the use of a PIE are not suitable, as well as requirements regarding a good communication policy with clients on how interpreting works, and on which are the circumstances that enable them to make the most of such equipment.

In spite of the relevance of other technological breakthroughs (telephone or video remote interpreting, more sophisticated consoles, smart pens, portable interpreting equipment that enables changes of mode, etc.) introduced in the last few decades, the truly explosive paradigm shift comes with the advent of Remote Simultaneous Interpreting (RSI). On May 2017, I was about to start a workshop for the members of AICE (the Spanish Association of Conference Interpreters) in Madrid, when I learnt that a Spanish start-up, The Global Password, had just provided the interpreting service at an important three-day conference (chaired by former Spanish Prime Minister Zapatero) in Huelva. I decided to phone the company’s CEO and was lucky to obtain relevant first-hand information from him about the service. When I shared this information with the members of AICE, it obviously became the hottest topic of the workshop, and it has also remained the most salient one in both the Spanish (and worldwide) professional and research arena.

It is not surprising, therefore, that the European Commission’s Directorate General for Interpretation (DG SCIC), the biggest employer of interpreters in the world, has already started to seriously consider RSI. On July 17, 2019, after testing four interpreting platforms —Interactio (Lithuania), Interprefy (Switzerland), Kudo (United States), and VoiceBoxer (Denmark)—, the DG SCIC concluded that “in principle, interpreting platforms can be used to provide interpretation services” (DG SCIC: 2019, 2).

The technology to provide RSI is the subject of a new ISO document (a deliverable on Simultaneous Interpreting Delivery Platforms that is intended to give guidance to providers and users about the minimum requirements for such platforms) for which there

is strong demand from the industry. The ISO Working Group charged with discussing the new ISO document (ISO TC37/SC5/WG31: ISO Technical Committee 37 - Language and Terminology, Sub Committee 5 - Translation, Interpreting and related technology, Working Group 3 - Facilities and equipment for interpreting service) held its meeting in Ottawa on June 26, 2019. The ISO working group is chaired by a SCIC representative and to help SCIC prepare an informed opinion for the ISO meeting, SCIC interpreters tested the four interpreting platforms in April and May 2019. An eleven-page report was issued after the tests and published in the SCIC's KCI (Knowledge Centre for Interpretation). At the moment, the document agreed in Ottawa has yet to be ratified by the national ISO committees.

To provide an account of the current situation regarding RSI as a case study, we have contacted all the incumbents and collected relevant information that can be regarded as a “snapshot” at the beginning of 2020 which maps the reactions of all the players involved. In the article “Foto fija de la interpretación simultánea remota al inicio del 2020”, I have included a report (AICE: 2019) from AICE (the Spanish Association of Conference Interpreters): “AICE y la interpretación remota”; a report (Cabrera and Aranda: 2019) by two members of the Spanish Committee of ISO (ISO TC37/SC5/WG31), one of whom was the only Spanish representative at the meeting in Ottawa: “Estado actual de la normalización de plataformas de interpretación simultánea a distancia”; and the responses to a questionnaire on RSI that includes four simple specific questions given by: a) the CEO of The Global Password, one of Spain's top RSI service providers, b) the managing director of Azafatas Alhambra, a top conference organizer and interpreting services provider, c) the managing director of Electrónica Galán, a top interpreting equipment and sound system provider, and d) the managers of Olyusei, probably the top interpreting hub in Spain. This material provides an accurate picture of the current atmosphere surrounding RSI at the turn of the decade.

All the technological disruption we describe in this issue, however, could put an end to the profession as such by virtue of the replacement of human interpreters by machine interpreting. In the last few years, I have always started the multiple presentations and workshops I have delivered on Interpreting and Technology around the world (notably the ones at two universities ranked among the top 25 in the world: University College London, 15, and Imperial College, 23) discussing this threat with my students that appears, to some, to be approaching inexorably. According to information that can be found on several sites, in preparation for the 2020 Olympics in Tokyo, researchers from Nara Institute of Science and Technology have been developing software to improve the accuracy and speed of machine interpretation to such a degree as to be able to provide conference interpreting.

Is the end of human interpreting really going to take place in just a few months? Well, it might be the case if some of the news we have been receiving lately from Japan proved to be true. If we read, for instance, the 2019 Autumn issue of the International Institute for Asian Studies Newsletter (Giustini, 2019), they are working “on a lag-free interpretation system and app to instantaneously translate the games' Japanese commentary into 27 languages”. To unveil this mystery, I have researched the matter

and, apparently, all the hype comes from an article that appeared in The Asahi Shimbun [widely regarded as the most respected daily newspaper and the second most popular in Japan] on September 25, 2013. The author of the article

“Faster automatic translation could cut time lag by 2020 Games”, Tatsuyuki Kobori, wrote: “We want to make possible the simultaneous interpretation of long speeches and news reports with this technology, said Satoshi Nakamura, a professor at the Graduate School of Information Science, Nara Institute of Science and Technology, in Nara, who led the research team that developed the technology.” And went on to say “When they tested the technology at a lecture, its accuracy and speed were comparable to a simultaneous interpreter with a year of experience”.

We contacted professor Satoshi Nakamura at Nara Institute of Science and Technology and invited him to send an account of Japan’s most recent developments regarding speech-to-speech translation to be included in this issue. We are extremely grateful to professor Nakamura and his team (Katsuhito Sudoh and Sakriani Sakti) for their effort to provide us with an update of their investigation in the article “Towards Machine Speech-to-speech Translation”. In both his article and our various email exchanges, Professor Nakamura was also kind enough to clarify the following: “For the service in the Olympic Games, the smartphone app named VoiceTra will be provided. The VoiceTra was developed at the National Institute of Information and Communication Technology, Japan, which is the national laboratory under the Ministry of Internal Affairs and Communication, Japan. Until March 2011, I was a director of the VoiceTra project. The VoiceTra is a speech translation service in the travel domain but it translates utterance by utterance, not simultaneously.”

Professor Nakamura’s contribution confirms that there have been numerous research activities on machine speech-to-speech translation (S2ST) in Japan. This article introduces those activities and his team’s recent work towards automatic simultaneous speech translation. S2ST system is basically composed of three modules: Large vocabulary continuous automatic speech recognition (ASR), machine text-to-text translation (MT), and text-to-speech synthesis (TTS). All the modules need to be multi-lingual in nature and thus necessitate multi-lingual speech and corpora for training models.

The authors conclude that the S2ST performance is drastically improved by deep learning and large training corpora, but there still remain many issues such as simultaneity, para-linguistics, context and situation dependency, intention, and cultural dependency. They confirm that further fundamental research is necessary to overcome those problems toward natural speech-to-speech translation, one that resembles more closely the output of human interpreters.

The detailed information provided by the team from Nara thus suggests that the end of human interpreting is extremely unlikely to take place in Japan in six months. In any case, we have also contacted VoiceTra to request their opinion, and the VoiceTra Support Team at the National Institute of Information and Communications Technology (NICT) informed us that:

“Our projects have been conducted as part of the Global Communication Plan, a nationwide initiative that was formed in 2014 to eliminate the language barriers in Japan towards the 2020 Tokyo Olympic/Paralympic Games. Our technology serves as the foundation of this Plan, and we expect to see many of the products/services that use our technology being widely used in various scenes during the event.” “So in short, in response to your question about whether we will provide an interpretation system for the 2020 Olympics - no, we will not provide such a system directly, but private companies that utilize our technology will hopefully do so.” So we have to wait until the Games in Tokyo start to see the scope of such implementation.

Another important announcement in this regard is the one carried out by Google AI on May 2019, when their software engineers Jia and Weiss (2019) described a new experimental system, called Translatotron, which is supposed to be “the first end-to-end, speech-to-speech solution that can directly translate speech from one language into speech in another language”. It has been widely disseminated and the coming months will be decisive for the evolution of this new system.

And what about the interpreting market? How does it react to the challenges of digital transformation? According to research published by Common Sense Advisory (CSA: 2019), 16.25% of the figures in the language services sector (nearly \$7.5 bn a year) worldwide correspond to Interpreting. In this context, we have to be very thankful for having a renowned expert in this market on board. Antonio Tejada, Managing Director at Capita Translation and Interpreting (one of the largest providers of interpreting services in the UK), who generously shares his clear vision on the public sector interpreting market, and explains whether it is ready for digital transformation.

According to him, it is only in the last 5 years that we have truly begun to experience it in a service that has historically been considered non-digital. Through Capita LiveLINK, their remote interpreting platform, they have converted 25% of their services from on-premise to remote, integrating over 400 of their traditionally on-premise professionals into the platform, thus transforming the delivery model rather than just implementing a piece of technology. More advanced models like the one applied by Stratus in the US healthcare system are also mentioned in this regard.

Tejada’s contribution analyses the impact of this digital transformation on interpreters, customers and technology suppliers. Regarding interpreters, they are considered the core of the ecosystem and the digital transformation that needs to take place in the interpreting market cannot happen without their engagement and support. Mention is made to the role of Universities and certification bodies, as there is an opportunity and a requirement to ensure interpreters are trained and qualifications are available. As for the customers, the public sector is starting to look at a large-scale conversion of on-premise interpreting requirements towards remote interpreting. Tejada believes that the introduction of remote interpreting platforms that can triage multiple service requirements will be key, but he admits there is work to be done from the owners of the government contracts prior to reaching this. Finally, in terms of technology suppliers, most of the investment is dedicated to proprietary solutions looking to displace the existing suppliers rather than enabling transformation, but traditional LSPs can find multiple options to

transform their translation workflows or service delivery models from independent technology suppliers.

In his view, the digital transformation of the interpreting market is an ecosystem shift that requires all elements to adapt as if they don't, there is a major opportunity for an external element to disrupt and shift the existing balances. This means adopting a different financial model and being prepared to see revenue generation shifting from on-premise to remote, which in the long run will mean higher growth. He believes that language service providers will also need to change the profile of the services offered.

Interpreters, of course, have to be considered in this realm, by making them more digital, supporting them through a journey that will surely present challenges but also considerable rewards, a better work life balance and the opportunity to develop their careers. Tejada concludes that the interpreting stakeholders must join forces to drive the digital transformation as an industry and not to just react to external forces.

Three of our eight contributions deal specifically with interpreter training and this confirms that it is increasingly becoming a topic of interest for researchers. In 2007, Jesús de Manuel and Annalisa Sandrelli published an article in *The Interpreter and Translator Trainer*, "The impact of information and communication technology on interpreter training: state-of-the-art and future prospects", that has become a seminal reference for the history of interpreter training in general. Fifteen years ago, two of the most salient international researchers in a field widely known today as CAIT (Computer Assisted Interpreter Training) provided a thorough overview of the realm as well as the future prospects that could be foreseen at the time. I am extremely thankful to my colleague Jesús de Manuel for accepting my offer and updating now those endeavours for the current issue of *Tradumàtica*. The twelve years that have gone by have actually transformed the intersection between Interpreting and Technology and De Manuel has proposed here a clear account of the scope of the changes involved.

Only 4 years ago, Annalisa Sandrelli (co-author of the aforementioned seminal article) also published an overview of the main trends in the relatively short history of CAIT: "Becoming an interpreter: the role of computer technology". According to her (Sandrelli: 2015, 131-132), there was an initial stage (2000-2010) when most interpreter training institutions lacked the adequate technical infrastructure and not all interpreter trainers were ready to use it, but some very interesting developments were seen since the turn of the decade. Now we are on the verge of a new decade and De Manuel's contribution starts his account of the history of CAIT quoting Sandrelli's periodization in three stages (Sandrelli 2015: 120-131) [the early period, the middle period and recent developments] and expands it with new proposals. According to Sandrelli, the early period includes a series of pioneering experiences that were aimed at providing trainees with materials for autonomous learning, either on DVD or via the university network; the middle one involves the creation of web-based courseware, on-line speech banks and the use of Course Management Systems (CMS) or Virtual Learning Environments (VLE); and new developments entail the first attempts to deliver interpreter training courses as distance learning modules (in particular the so-called "virtual classes") and, as an influence of the gaming world, the various attempts to explore 3D virtual reality environments.

Sandrelli (2015, 120-121) identifies Marius, an innovative research and teaching project developed by the University of Granada, as the most important landmark of the early period. Its leader, De Manuel, and I have worked hand-in-hand in this project (De Manuel, Jiménez, et al: 2004) for almost two decades and have witnessed how universities and professors around the world have increasingly joined us in using authentic digital material in the conference interpreting classroom. In the early stages of the project, when I was Visiting Professor at Monterey Institute of International Studies, the use of this type of material contrasted with that of traditional tapes recorded by professors to provide the speeches that students would interpret, which was the regular approach then not only in the American institution (a true benchmark in our field) but in most interpreter training centres worldwide. Today the proposal we started to make almost twenty years ago has been commonly accepted in classrooms around the globe. As Sandrelli points out (2015: 121), the most valuable contribution of the project is “the extremely detailed classification of authentic materials and the research done on the students’ perception of the suggested level of difficulty and intended use of the materials”.

In his contribution, De Manuel proposes a more functional and realistic approach based on Pöchhacker’s hypertext model (Pöchhacker: 1994 and 1995). He also advocates for a socio-constructivist, student-centred focus that should be more diverse from a cultural, ideological and institutional perspective; since, in his view, some other proposals have mainly focused on technology and ignored pedagogical developments that are successfully applied in other disciplines.

Pedro Castillo’s contribution discusses how the impact of NICTs (New Information and Communication Technologies) on interpreters’ work in the media can be transposed to the interpreting classroom by using interpreter-mediated TV and radio broadcasts for consecutive, simultaneous and dialogue interpreting training purposes with the enhancement of new technologies. To this end, he focuses on the use of sound and video editing software by interpreters for producing pre-recorded interpreter-mediated news features for TV and live dialogue radio interpreting. His purpose is first to acknowledge the potential of NICTs for interpreter training in a practical context; and second, build a pedagogical model based on the pioneering practice of media outlets such as ARTE, the French-German broadcasting company, and RTVE, the Spanish public broadcaster.

Castillo’s research on media interpreting has been carried out over the last few years, notably through his interesting PhD thesis (Castillo: 2015) from Edinburgh’s Heriot Watt University on organisational, interactional and discursive aspects of dialogue interpreting in radio settings. He has become one of the most relevant experts in the domain and was assigned with the media interpreting analysis for the 2015 Routledge Handbook of Interpreting (Castillo: 2015b).

Media interpreting, and more specifically TV interpreting, has been the focus of an increasing body of research over the last 20 years, with an exponential increase in research literature in the last decade. According to Castillo, this is the case for two main reasons: scholars have gained easier access to interpreter-mediated data, and practicing interpreters a high degree of exposure to media interpreting. However, the

impact on the training of future interpreters has not been strong enough, due to the lack of literature on the use of interpreter-mediated broadcasts for training purposes.

During the last decade, an increasing number of publications have been issued on media interpreting, but reference has to be made to a project conceived and started by the late Francesco Straniero (and finished by Caterina Falbo), a specific issue of The Interpreters' Newsletter devoted to TV Interpreting. In my contribution to that publication (Jiménez Serrano: 2011), I identified the extreme conditions in which the professional works within this environment, in some cases the interpreter may find at least some [even if slight] room to manoeuvre, but in others all interpreters are affected in more or less the same way, because there is nothing they can do to mitigate the obstacles encountered. I therefore agree with one of Castillo's conclusions: professional media interpreters not only need proficient interpreting skills, but they must also have a thorough understanding of the media and the new technologies involved in producing interpreter-mediated broadcasts.

The work presented by Castillo here is the result of nearly ten years of research on TV and radio broadcasting under different projects and over 14 years of teaching interpreting. He includes a case study with a group of interpreted news and interviews on TV and radio, to be interpreted and recorded by students using free and accessible software, such as Audacity or Pro Tools. A set of training activities are designed to motivate students to practice interpreting and improve their delivery skills from the early stages of their training by means of several broadcast events with a diversity of situational arrangements and interactional challenges.

Castillo concludes that two aspects are of fundamental importance: working with interdisciplinary groups (including interpreters, scholars, media stakeholders and professionals) and establishing action-research projects which have the time and resources to produce pedagogically sound training materials grounded in professional practice.

As Castillo rightly points out in his article, taking advantage of new technologies so that we can successfully introduce them in the classroom environment is not an easy task. This becomes particularly relevant when considering the scope of our article by Marta Arumí and Pilar Sánchez-Gijón, two professors from Universitat Autònoma de Barcelona, one of the top two Spanish universities in the field of Translation and Interpreting (together with the University of Granada; and according to Spanish newspaper El Mundo's survey, the only one of its kind in Spain), which deals with the introduction of digital devices as note-taking tools in consecutive interpreting. Due to the difficulties involved in the process, many trainers are not very willing to embrace sophisticated technologies for their work with interpreting trainees in the classroom, but, as we will see when we analyse their conclusions, once the results of their study were considered, the trainers seemed to acknowledge some pedagogical advantages.

Arumí and Sánchez-Gijón's experience was carried out during the 2018-19 academic year with both students and trainers of the Master in Conference Interpreting of the Universitat Autònoma de Barcelona. A pilot study was implemented and a questionnaire

was used to collect their impressions with a view to assessing the pros and cons of regularly introducing note taking on a touch-screen device.

The main goal of their study is to provide a series of recommendations regarding pedagogical and technological aspects that should be considered before introducing these type of devices in the training of consecutive interpreters. According to the authors, the increasing use of touch-screen mobile devices (mobile phones, tablets, laptops) in our daily personal and professional life makes it possible for some interpreters to consider them as “the ideal boothmate” (Hof: 2012). Although Arumí and Sánchez-Gijón see these tools as a promising pedagogical aid, they have not identified any studies based on their introduction as regular tools in the interpreting classroom.

They do find several advantages in that scenario: trainers would gain permanent access to the student’s note-taking process; the final product could be viewed in the classroom’s screen, highlighting correct performances and suggesting options to improve it; and feedback could therefore be more direct and customized. These digital devices, however, should guarantee that notes are taken in the whole screen and not in just a part of it, that a high-resolution product is obtained, and that the screen is highly sensitive to the writing process.

The authors conclude that the introduction of the technology does not affect the structure of the discourse of the student, since it does not depend on the use of a traditional or a digital tool, but on the note-taking skills of that student. Although some trainers are reluctant to introduce this type of digital tool, they seem to acknowledge some pedagogical advantages such as the ability to show individual notes to the whole group, or the obvious benefits regarding assessment and autonomous work on the part of the student. More customized and useful feedback could also be provided to the student.

With all these considerations, we hope to contribute to the development of a changing domain that is undergoing an explosive paradigm transformation on an unprecedented scale. Machine interpreting may not be a true threat next year, but remote simultaneous interpreting is already shaking up the market, and probably some new tools that are now being devised will also surprise us very soon. The best is probably yet to come...

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